

## ABSTRACT

Methods, systems and media for separating polymer mixtures. A mixture including polymeric components is provided. A particulate media is added to the mixture, where the  
5 particulate media can selectively mediate a triboelectric charging of the polymer mixture. The media includes a polymeric material having a selected position within an electrostatic charging sequence and a functional additive. The mixture is triboelectrically charged with the media. Two or more components of the polymer mixture are separated according to the triboelectric charge. A portion of the particulate media can be recovered using a recovery  
10 process, where the functional additive is selected for compatibility with the recovery process.

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